

In re Application of: Benjamin GEIGER
Serial No.: 10/524,275
Filed: February 11, 2005
Office Action Mailing Date: March 26, 2008

Examiner: Karen C. CARLSON
Group Art Unit: 1656
Attorney Docket: 29140

In the Claims:

1-15. (Cancelled)

16. (Currently Amended) A method of detecting a compartment of a cell or a macromolecule of the cell, the method comprising:

(a) expressing a polynucleotide encoding a chimeric polypeptide in the cell, said chimeric polypeptide including:

(i) a first polypeptide region being capable of specifically binding at least one detectable molecule, said first polypeptide region comprising a single chain Fv; and

(ii) a second polypeptide region being capable of specifically binding the macromolecule of the cell; or targeting into a specific cell compartment, said second polypeptide region comprising S-AKAP84;

(b) exposing the cell to said detectable molecule under conditions suitable for binding of said detectable molecule to said first polypeptide region; and

(c) analyzing a presence of said detectable molecule in the compartment of the cell, or in association with said macromolecule of the cell, thereby detecting the compartment of the cell or macromolecule of the cell.

17. (Previously Presented) The method of claim 16, wherein the cell is selected from the group consisting of a bacterium cell, a protozoa cell, a fungus cell, a yeast cell, an algae cell, a plant cell and an animal cell.

18. (Previously Presented) The method of claim 16, wherein step (a) is effected by transfecting a nucleic acid construct encoding said chimeric polypeptide into the cell.

19. (Previously Presented) The method of claim 16, wherein step (b) is effected by contacting said cell and said detectable molecule in a culture medium.

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20. (Original) The method of claim 16, further comprising a step of visualizing said detectable molecule.

21. (Original) The method of claim 20, wherein said visualizing is effected using a microscope.

22. (Original) The method of claim 21, wherein said microscope is equipped with a light source.

23-43. (Cancelled)

44. (Previously Presented) A method of detecting a compartment of a cell comprising:

(a) expressing a polynucleotide encoding a chimeric polypeptide in the cell, said chimeric polypeptide including:

(i) a first polypeptide region being capable of specifically binding at least one detectable molecule; and

(ii) a second polypeptide region being capable of targeting into a specific cell compartment; and

(b) exposing the cell to said detectable molecule under conditions suitable for binding of said detectable molecule to said first polypeptide region; and

(c) analyzing a presence of said detectable molecule in the compartment of the cell, thereby detecting the compartment of the cell.

45. (Previously Presented) The method of claim 44, wherein the cell is selected from the group consisting of a bacterium cell, a protozoa cell, a fungus cell, a yeast cell, an algae cell, a plant cell and an animal cell.

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46. (Cancelled)

47. (Previously Presented) The method of claim 44, wherein step (a) is effected by transfecting a nucleic acid construct encoding said chimeric polypeptide into the cell.

48. (Previously Presented) The method of claim 44, wherein step (b) is effected by contacting said cell and said detectable molecule in a culture medium.

49. (Previously Presented) The method of claim 44, further comprising a step of visualizing said detectable molecule.

50. (Previously Presented) The method of claim 49, wherein said visualizing is effected using a microscope.

51. (Previously Presented) The method of claim 50, wherein said microscope is equipped with a light source.

52-61. (Cancelled)

62. (Currently Amended) ~~The method of claim 16, wherein the~~ A method of detecting a compartment of a cell or a macromolecule of the cell, the method comprising:

(a) expressing a polynucleotide encoding a chimeric polypeptide in the cell, said chimeric polypeptide including:

(i) a first polypeptide region being capable of specifically binding at least one detectable molecule; and

(ii) a second polypeptide region being capable of specifically binding the macromolecule of the cell; or targeting into a specific cell compartment, said second polypeptide region comprises comprising a domain selected from the group consisting of

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a a cell adhesion molecule binding domain, a membrane anchor protein domain, a human SDH Q-reductase domain, a growth factor receptor domain, a receptor binding domain, a protein kinase AII domain, a cellulose binding domain, a lipid binding domain, a polynucleotide binding domain, a tubulin binding domain and an actin binding domain;

(b) exposing the cell to said detectable molecule under conditions suitable for binding of said detectable molecule to said first polypeptide region; and

(c) analyzing a presence of said detectable molecule in the compartment of the cell, or in association with said macromolecule of the cell, thereby detecting the compartment of the cell or macromolecule of the cell.

63. (Currently Amended) The method of claim 44, wherein the second polypeptide region comprises a domain selected from the group consisting of a a-cell adhesion molecule binding domain, a membrane anchor protein domain, a human SDH Q-reductase domain, a growth factor receptor domain, a receptor binding domain, a protein kinase AII domain, a cellulose binding domain, a lipid binding domain, a polynucleotide binding domain, a tubulin binding domain and an actin binding domain.